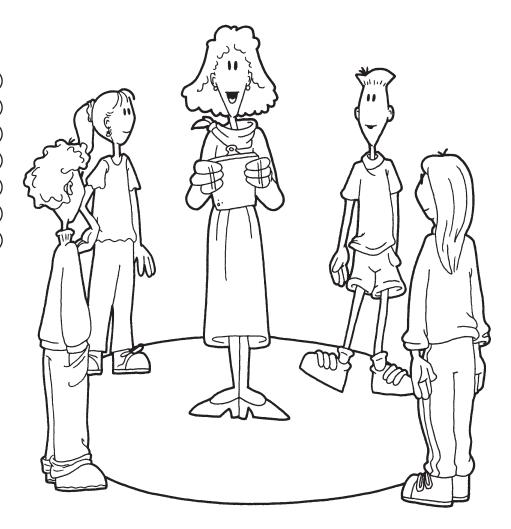
Brain-Based Instructional Strategies Boost Retention

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Introducing...

Dr. Spencer Kagan



Dr. Spencer Kagan is an internationally acclaimed researcher, presenter and author of over 100 books, chapters, and scientific journal articles. He is the principal author of the single most comprehensive book for educators in each of four fields: cooperative learning, multiple intelligences, classroom discipline, and classroom energizers. He provides workshops and keynotes in twenty countries and his books are translated into many languages. Dr. Kagan developed the concept of structures;

his popular cooperative learning and multiple intelligences structures like Numbered Heads Together and Timed Pair Share are used in classrooms world-wide. Dr. Kagan has been featured in the leading educational magazines including *Educational Leadership*, *Instructor*, *Learning Magazine*, and *Video Journal*. He is in high demand as a keynote speaker at national and international conferences.

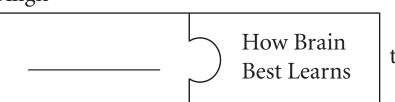
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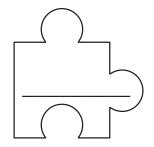
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4 Goals

- 1. Principles of ______ Teaching.
- 2. Align



through



- 3. Overview achievement: _____ and _____
- 4.



Deepen our understanding of our __ pound miracles!

-Case Study **4**

Berkley Elementary School

Randy Borland, Principal

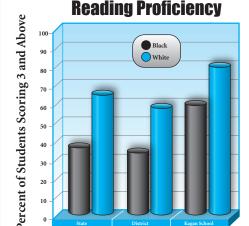
Berkley Elementary school is a K–5 charter school in the Polk County School District in Auburndale, Florida. Berkley designated itself as a "Kagan School," and provided training in Kagan instructional strategies for all of its teachers. Florida grades schools to measure schools' academic performance. Each school is assigned an A to F letter grade based on their performance on the Florida Comprehensive Assessment Test (FCAT), the percent of eligible students who took the test, and whether or not students made progress in reading and math. Berkley has risen to and has maintained an A grade.⁵¹

Berkley outperforms their district and Florida state norms on assessment measures. Not only is there a higher percent of students proficient overall, but the achievement gap between black and white students is dramatically reduced. Take a look at the reading and math achievement graphs comparing Berkley to its district and state neighbors. The graphs show the achievement scores of black and white students.

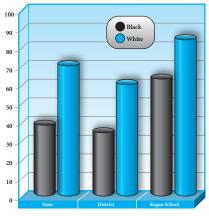
White students outperform white students in the state and in the district. Black students outperform black students in the state and district too. Also of interest, in both math and reading, black students from Berkley outperform white students

from other schools in the district.

Florida Comprehensive Assessment Test (FCAT) 2004-05, Grades 3-5



Math Proficiency



Without emphasis on closing the achievement gap per se, Berkley teachers are successful at closing the gap. The achievement gap is approximately 45% for schools in the state and district. The gap is reduced to approximately 25% for the Kagan school.

Principal Randy Borland points to Kagan as the major contributing factor explaining their success.

"We opened as a Title I school, 61% free and reduced lunch. We were very diversified. We were just like any other school. We had our problems, kids adjusting, cliques, the fighting, the hierarchy you see in some classrooms and grade levels. But it's all disappeared. Completely. And it did it in the first year we implemented Kagan.

The kids love it. It's fun to them. The teachers like it because it's friendly and easy to implement a structure. It's very content friendly. It's just so different from traditional teaching that we've used in the last 200 years. It's just different."

—Randy Borland, Principal, Berkley Elementary School

Case Study 5

Lincoln Elementary School

Robert Williams, Principal

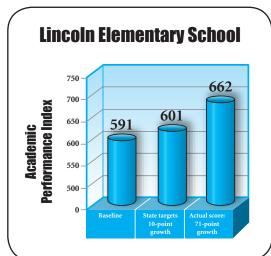
Lincoln Elementary School in Long Beach,
California had not met Annual Yearly Progress
for a number of years prior to 2000 and so had
been placed on Program Improvement as dictated by Title I and No Child Left Behind legislation. Then they began Kagan training. Training
consisted of workshops at the school and a
retreat at which all teachers learned the
Kagan Structures. That year and the following
year they made AYP and so were taken off Program Improvement status.

Lincoln Elementary School raised its Academic Performance Index (API) by 71 points whereas the state targeted just a 10-point growth. Lincoln outpaced their target by over 600 percent! What's

impressive about Lincoln's gains is they are the second largest gains in a very large district that has taken the national stage for it's ability to demonstrate the greatest overall performance and improvement in student achievement while reducing achievement gaps. Long Beach Unified School district

is the 3rd largest school district in California. Tens of thousands of pieces of information on student performance collected by an independent team of national experts show that Long Beach is outperforming America's large school systems. Their low-income African-American and Hispanic students outperformed their peers in similar urban districts in reading and math at all levels.⁵² Principal Robert Williams credits the dramatic gains at Lincoln to the Kagan Structures and their ability to engage all students. Teachers learned to integrate the structures into their moment-to-moment teaching. Initially, he said, teachers would "do Kagan." With practice they transitioned into using Kagan structures to more efficiently deliver any content. In his words,

"The teachers internalized Kagan Structures so they became part of how they taught." Principal Williams also cites the importance of PIES. Teachers learned to check their activities to make sure the PIES principles were in place.

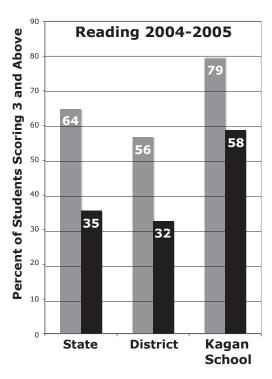


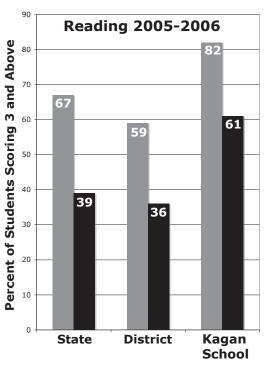
"We believe our achievement in posting the second biggest elementary API increase in our district is a reflection of the way we have improved our teachers' academic and pedagogical expertise in equal measure. We have focused on student participation in their own learning process by implementing the cooperative learning structures developed by Dr. Spencer Kagan. By combining our curriculum with Dr. Kagan's Structures, teachers actively involve at least 50 percent of all students at any time. This is a far cry from classrooms where the only person active is either the teacher or the one student whom he/she has asked a question."

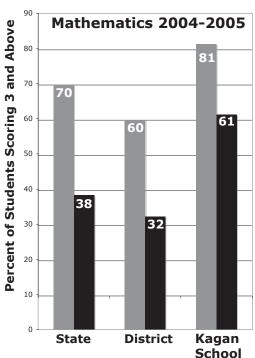
—Robert Williams, Principal, Lincoln Elementary School

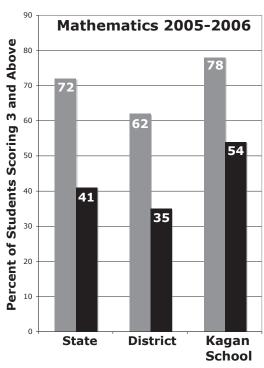
Reading & Math Assessment Results











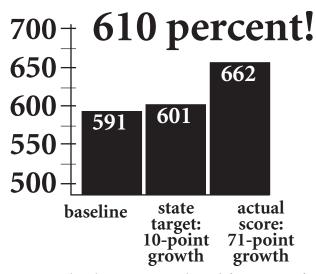
Florida Comprehensive Assessment Test (FCAT) Berkley Charter School, Grades 3–5

Source: NCLB School Public Accountability Report

Kagan Structures Boost Achievement

At Lincoln Elementary School in Long Beach, CA

Kagan helps school outpace state API performance target by over



Lincoln Elementary School in Long Beach, California significantly raises its Academic Performance Index by 71 points when the state targeted just a 10-point growth. Lincoln outpaced their target by 600 percent! Principal Robert Williams identifies Kagan Structures as a major contributing factor to their success.



We believe our achievement in posting the second biggest elementary API increase in our district is a reflection of the way we have improved our teachers' academic and pedagogical expertise in equal measure. We have focused on student participation in their own learning process by implementing the cooperative learning structures developed by Dr. Spencer Kagan. By combining our curriculum with Dr. Kagan's Structures, teachers actively involve at least 50 percent of all students at any time. This is a far cry from classrooms where the only person active is either the teacher or the one student whom he/she has asked a question.

—Robert Williams, Principal, Lincoln Elementary School

A CACALL

Take Off, Touch Pown

Students stand and sit to answer questions as the teacher polls the class.

Steps

- **1** Teacher makes a statement.
- 2 Students to whom the statement applies stand up ("Take Off").
- **3** Those to whom it does NOT apply remain seated.



- **1** Teacher makes the next statement:
 - Standing students: If statement applies, remain standing; otherwise sit down ("Touch Down").
 - Seated students: If statement applies, stand up; otherwise remain seated.

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Take Off-Touch Down v. Raise a Hand

- **☆** Better
- **☆** Brain craves _____

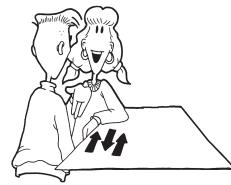
MARIA

RallyRobin

In pairs, students alternate generating oral responses.

Steps

Teacher poses a problem to which there are multiple possible responses or solutions.



In pairs, students take turns stating responses or solutions.

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Frequent Processing

By taking a moment to process using a Kagan Structure...

- ☆ More ______ for new learning
- ☆ Clarify and refine _____
- ☆ _____ in long-term memory
- ☆ Clear _____ memory
- memory systems multiple intelligences and multiple

(NOUS)

Three-Step Interview

Students interview a partner and then share with teammates what they learned.



- Teacher provides the interview topic and states the duration of the interview.
- **1** Teacher calls for think time.
- **3** In pairs, Student A interviews Student B.



- Pairs switch roles: Student B interviews Student A.
- **5** Pairs pair to form groups of four.
- RoundRobin: Each student, in turn, shares with the team what he/she learned in the interview.

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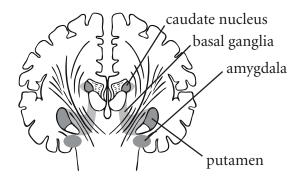
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Teambuilding

Academic Content



The Amygdalae

- 1. There are ____ Amygdalae:
 - Left amygdala processes tone of voice
 - Right amygdala processes faces
- 2. Both side are ______.
- 3. When do the Amygdalae fire most?
 - ______ > Friends
 - ______ > Same race
 - ______ > Happy face
 - _____ > Friendly face
 - _____ ____ > In-group
- 4. Linked to ____ of the brain
- 5. The Amygdalae Explain
 - _____learning

Teacher A, B, C Teacher A: Whole Class Teacher B: Group Work Teacher C: Kagan Structures PET Scans Words: **Visual Cortex** Words: to a Partner: Wernicke's Area Broca's Area Widespread Activity Carter, Rita. Mapping the Mind. Berkeley, CA: University of California Press, 1999.

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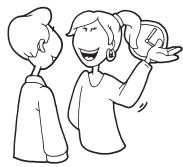
Timed Pair Share

Partners take timed turns listening and sharing.

Steps

- Teacher announces a topic and states how long each student will have to share.
- **2** Teacher provides think time.
- **3** In pairs, Partner A shares; Partner B listens.
- **4** Partner B responds.





5 Partners switch roles.

Optional: Before Step 4, the teacher may provide response gambits.
Copycat response gambits:

- "Thanks for sharing!"
- "You are interesting to listen to!"

Complete these sentence gambits:

- "One thing I learned listening to you was..."
- "I enjoyed listening to you because..."

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